Métodos de integración

Calcule las siguientes integrales:

1. $\displaystyle\int \frac{x^2-1}{(x^4+3x^2+1)\arctan\left(x+\frac{1}{x}\right)}\,dx$
2. $\displaystyle\int \frac{\sin(x)+x\cos(x)}{(1-x\sin(x))\sqrt{x^2-1-x^2\cos^2(x)}}\,dx$
3. $\displaystyle\int \frac{4\sin(2x)+8\sin(x)+\cos(x)}{3\sin(2x)+3\cos(x)+8\sin(x)+4}\,dx$
4. $\displaystyle\int \frac{\ln(x)}{x(\ln^2(x)-2)\sqrt{\ln^4(x)-4\ln^2(x)+5}}\,dx$
5. $\displaystyle\int \frac{(1-\sqrt{x^2+x+1})^3}{x^5\sqrt{x^2+x+1}}\,dx$
6. $\displaystyle\int \frac{x}{(x-1)^4\sqrt{x^2+4x+1}}\,dx$
7. $\displaystyle\int \frac{\cosh(x)}{\sinh(x)\sqrt[3]{1+\sqrt{\sinh(x)}}}\,dx$
8. $\displaystyle\int \frac{e^{e^{\ln(\cos(2x))}-\ln(\sec(2x))}+e^{\cos(2x)+4\ln(x^{1/4}\sin(2x))}}{e^{(\cos(2x)-3\ln(\csc(2x)))}}\,dx$
9. $\displaystyle\int \frac{1}{\sqrt{x-1}\sqrt{2-x}[4\sqrt{x-1}+3\sqrt{2-x}]}\,dx$
10. $\displaystyle\int \frac{2+2\cosh(x)-\sinh(x)}{2+2\cosh(x)+\sinh(x)}\,dx$

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